

ABSTRACT OF THE DISCLOSURE

An improved tantalum-carbon capacitor employs activated carbon in place of expensive metals to achieve a large surface area, and therefore higher capacitance, but at substantially lower cost than can be achieved using expensive metals to increase surface area. The capacitor includes a tantalum case, a tantalum anode, a dielectric layer on the anode, an electrolyte in contact with the dielectric layer on the anode, a layer of tantalum carbide on an inner surface of the case, and a layer of activated carbon between the layer of tantalum carbide and the electrolyte.